

NETL

Office of Coal & Environmental Systems

Hydrogen Projects

Investigation of the Behavior of Ft-derived Jet Fuels in Aviation Systems

Product Line: Coal Fuels and Hydrogen, Transportation Fuels and Chemicals

Background

The National Energy Technology Laboratory (NETL) directs the U.S. Department of Energy's Transportation Fuels Research Program. One of the objectives of this program is to develop ultra-clean transportation fuels and to understand the properties of these fuels and their subsequent impact on performance. The joint partnership between NETL and the Air Force Research Laboratory's Propulsion Directorate provides the technical basis for the development and rapid transition of improved fuels derived from natural gas (FT-derived liquids) and other fossil energy resources. FT-derived liquids are zero-sulfur fuels that have unique properties and offer the promise of improved jet engine operations and lower pollutant emissions simultaneously. The purpose of this task is to investigate the use of FT-derived fuels in jet propulsion systems and evaluate the benefits of these FT-derived fuels in these systems to reduce particulate emissions and provide increased thermal stability and heat sink. In addition, since FT-derived fuels also represent a potential significant resource that will enter the jet fuel pool in the next 10-20 years, research shall be conducted to allow the use of these materials in all military systems.

Objective/Goal

The objective of this program is to develop ultra-clean transportation fuels, and understand the properties of these fuels and their subsequent impact on performance. The joint partnership between NETL and the Air Force Research Laboratory's Propulsion Directorate provides the technical basis for the development and rapid transition of improved fuels derived from natural gas (Fischer-Tropsch derived liquids) and other fossil energy resources.

Contact Information

Project Lead Organization

U.S. Air Force
Wright Laboratory
Dayton, OH 45433

Principal Investigator

William E. Harrison

Other Participants

n/a

Planned Project Funding

DOE \$ 300,000
Non-DOE \$ 850,000
Total \$1,150,000

Period of Performance

Jan. 2002 - Sep. 2004

NETL Product Manager

John Winslow
626 Cochran's Mill Road
Pittsburgh, PA 15236
412-386-6072
John.winslow@netl.doe.gov

NETL Project Manager

Shelby Rogers
626 Cochran's Mill Road
Pittsburgh, PA 15236
412-386-6132
Shelby.rogers@netl.doe.gov